

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Kie Y. Ahn et al.	Examiner:	Unknown
Serial No.:	Unknown	Group Art Unit:	Unknown
Filed:	Herewith	Docket:	303.685US2
Title:	MULTILEVEL COPPER INTERCONNECT WITH DOUBLE PASSIVATION		

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with 37 C.F.R. §§ 1.97 *et. seq.*, the enclosed materials are brought to the attention of the Examiner for consideration in connection with the above-identified patent application. Applicants respectfully request that this Information Disclosure Statement be entered and the documents listed on the attached Form 1449 be considered by the Examiner and made of record. Pursuant to the provisions of MPEP 609, Applicants request that a copy of the 1449 form, initialed as being considered by the Examiner, be returned to the Applicants with the next official communication.

Pursuant to 37 C.F.R. §1.97(b), it is believed that no fee or statement is required with the Information Disclosure Statement. However, if an Office Action on the merits has been mailed, the Commissioner is hereby authorized to charge the required fees to Deposit Account No. 19-0743 in order to have this Information Disclosure Statement considered.

Pursuant to 37 C.F.R. §1.98(d), copies of some of the listed documents are not provided as these references were previously cited by or submitted to the U.S. Patent Office in connection with Applicants' prior U.S. application, Serial No. 09/584157, filed on May 31, 2000, which is relied upon for an earlier filing date under 35 U.S.C. §120.

Serial No :Unknown
Filing Date: Herewith

Title: MULTILEVEL COPPER INTERCONNECT WITH DOUBLE PASSIVATION

Applicant believes that the U.S. Patent & Trademark Office has waived the requirement under 37 C.F.R. 1.98 (a)(2)(i) for submitting a copy of each cited U.S. patent and each U.S. patent application publication. The waiver is provided in a pre-OG notice from the U.S. Patent & Trademark Office entitled "Information Disclosure Statements May Be Filed Without Copies of U.S. Patents and Published Applications in Patent Applications filed after June 30, 2003" and dated July 11, 2003. Applicant acknowledges the requirement to submit copies of foreign patent documents and non-patent literature in accordance with 37 C.F.R. 1.98(a)(2).

The Examiner is invited to contact the Applicants' Representative at the below-listed telephone number if there are any questions regarding this communication.

Respectfully submitted,

KIE Y. AHN ET AL.

By their Representatives,

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Date 24 Nov '03

By 
Timothy B. Clise

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Date of Deposit: November 24, 2003

This paper or fee is being deposited on the date indicated above with the United States Postal Service pursuant to 37 CFR 1.10, and is addressed to The Commissioner for Patents, Mail Stop Patent Application, P.O. Box 1450, Alexandria, VA 22313-1450.

<p>Substitute for form 1449A/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)</p>		<i>Complete if Known</i>	
		Applicant Number	Unknown
		Filing Date	Even Date Herewith
		First Named Inventor	Ahn, Kie
		Group Art Unit	Unknown
		Examiner Name	Unknown
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US PATENT DOCUMENTS

Examiner Initial *	USP Document Number	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	Filing Date If Appropriate
	US-2001/0002333	05/31/2001	Huang, Chao-Yuan , et al.	438	637	03/29/1999
	US-1,254,987	01/29/1918	Cooper, H. S.			10/15/1917
	US-1,976,375	10/09/1934	Smith, J. K.	148	11.5	01/27/1931
	US-2001/0054771	12/27/2001	Wark, J. M., et al.			
	US-2002/0014646	02/07/2002	Tsu, et al.	257	296	
	US-2002/0028552	03/07/2002	Lee, et al.	438	243	
	US-2002/0096768	07/25/2002	Joshi, Rajiv Vasant	257	750	
	US-2002/0109233	08/15/2002	Farrar, Paul A.	257	762	
	US-2,244,608	06/03/1941	Cooper, H. S.	75	138	02/09/1939
	US-2,842,438	07/08/1958	Saarivirta, M. J., et al.	75	153	08/02/1956
	US-3,147,110	09/01/1964	Foerster, G. S.	75	122.5	11/27/1961
	US-3,337,334	08/22/1967	Fenn, R. W., et al.	75	150	12/06/1963
	US-3,506,438	04/14/1970	Krock, R. H., et al.	75	208	07/24/1967
	US-3,548,915	10/22/1970	Richmond, W. J., et al.	164	68	06/11/1969
	US-3,548,948	12/22/1970	Richmond, W. J., et al.	164	68	01/23/1969
	US-3,687,737	08/29/1972	Krock, R. H., et al.	148	2	07/17/1970
	US-3,832,456	08/27/1974	Kobetz, Paul , et al.	423	645	10/18/1962
	US-3,923,500	12/02/1975	Kitazawa, Kunio , et al.	75	156.5	09/04/1974
	US-3,954,570	06/04/1976	Shirk, , et al.	204	15	11/11/1974
	US-4,022,931	05/10/1977	Black, J. , et al.	427	91	06/13/1975
	US-4,029,377	06/14/1977	Guglielmi, A. C.	339	19	02/03/1976
	US-4,065,330	12/27/1977	Masumoto, Hakaru , et al.	148	31.55	02/22/1977
	US-4,101,855	07/18/1978	Drapeau, Donald R.	335	106	11/05/1976
	US-4,158,719	06/19/1979	Frantz, E.	428	567	06/09/1977
	US-4,233,066	11/11/1980	Sundin, Anders O., et al.	75	142	08/14/1975
	US-4,314,594	02/09/1982	Pfeifer, Friedrich , et al.	148	108	04/29/1980
	US-4,386,116	05/31/1983	Nair, , et al.	427	99	12/24/1981
	US-4,389,429	06/21/1983	Soclof, Sidney I.	438	492	06/28/1982

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)		<table border="1"> <tr> <td>Application Number</td> <td colspan="4">Unknown</td> </tr> <tr> <td>Filing Date</td> <td colspan="4">Even Date Herewith</td> </tr> <tr> <td>First Named Inventor</td> <td colspan="4">Ahn, Kie</td> </tr> <tr> <td>Group Art Unit</td> <td colspan="4">Unknown</td> </tr> <tr> <td>Examiner Name</td> <td colspan="4">Unknown</td> </tr> </table>					Application Number	Unknown				Filing Date	Even Date Herewith				First Named Inventor	Ahn, Kie				Group Art Unit	Unknown				Examiner Name	Unknown			
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Group Art Unit	Unknown																														
Examiner Name	Unknown																														
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	US-4,394,223	07/19/1983	Hall, Dean	204	15	10/06/1981
	US-4,423,547	01/03/1984	Farrar, P. A., et al.	29	571	06/01/1981
	US-4,561,173	12/31/1985	Te Velde, T. S.	438	619	06/07/1983
	US-4,565,157	01/21/1986	Brors, D. L., et al.	118	719	03/29/1983
	US-4,574,095	03/04/1986	Baum, , et al.	427	53.1	11/19/1984
	US-4,709,359	11/24/1987	Loftin, Rayford A.	367	155	06/28/1982
	US-4,762,728	08/09/1988	Keyser, T. , et al.	427	38	11/26/1985
	US-4,788,082	11/29/1988	Schmitt,	427	248.1	12/12/1985
	US-4,847,111	07/11/1989	Chow, Yu C., et al.	427	38	06/30/1988
	US-4,931,410	06/05/1990	Tokunaga, , et al.	437	189	08/25/1988
	US-4,948,459	08/14/1990	Van Laarhoven, , et al.	156	643	01/04/1989
	US-4,962,058	10/09/1990	Cronin, J. E., et al.	437	187	04/14/1989
	US-4,996,584	02/26/1991	Young, P. L., et al.	357	71	10/13/1988
	US-5,019,531	05/28/1991	Awaya, N. , et al.	437	180	05/19/1989
	US-5,034,799	07/23/1991	Tomita, K. , et al.	357	71	02/14/1990
	US-5,045,635	09/02/1991	Kaplo, Joseph J., et al.	174	35 GC	06/16/1989
	US-5,084,412	01/28/1992	Nakasaki, Yasushi	437	189	10/01/1990
	US-5,100,499	03/31/1992	Douglas, M. A.	156	635	06/25/1991
	US-5,130,274	07/14/1992	Harper, J. M., et al.	437	195	04/05/1991
	US-5,148,260	09/15/1992	Inoue, T. , et al.	357	67	09/07/1990
	US-5,158,986	10/27/1992	Cha, S. W., et al.	521	82	04/05/1991
	US-5,173,442	12/22/1992	Carey, D. H.	437	173	03/24/1992
	US-5,231,036	07/27/1993	Miyauchi, N. , et al.			
	US-5,231,056	07/27/1993	Sandhu, G. S.	437	200	01/15/1992
	US-5,240,878	08/31/1993	Fitzsimmons, J. , et al.	437	187	04/26/1991
	US-5,243,222	09/07/1993	Harper, J. M., et al.	257	774	01/08/1992
	US-5,256,205	10/26/1993	Schmitt III, , et al.	118	723	01/07/1992
	US-5,324,683	06/28/1994	Fitch, J. T., et al.	437	65	06/02/1993
	US-5,324,684	06/28/1994	Kermani, , et al.	437	95	02/25/1992
	US-5,334,356	08/02/1994	Baldwin, D. F., et al.	422	133	08/24/1992
	US-5,336,914	08/09/1994	Andoh, Takeshi	257	368	06/19/1992
	US-5,354,712	10/11/1994	Ho, Y. Q., et al.	437	195	11/12/1992
	US-5,371,042	12/06/1994	Ong, E.	437	194	06/16/1992
	US-5,384,284	01/24/1995	Doan, T T., et al.	437	190	10/01/1993
	US-5,399,897	03/21/1995	Cunningham, B. T., et al.	257	467	11/29/1993
	US-5,408,742	04/25/1995	Zaidel, S. A., et al.	29	846	10/22/1993
	US-5,413,687	05/09/1995	Barton, C. L., et al.	204	192.14	11/27/1991
	US-5,413,962	05/09/1995	Lur, Water , et al.	437	195	07/15/1994
	US-5,424,030	06/13/1995	Takahashi, H.	420	473	12/03/1993

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DATE CONSIDERED

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Applicant Number

Unknown

Filing Date

Even Date Herewith

First Named Inventor

Ahn, Kie

Group Art Unit

Unknown

Examiner Name

Unknown

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	US-5,426,330	06/20/1995	Joshi, R. V., et al.	257	752	09/21/1993
	US-5,442,237	08/15/1995	Hughes, Henry G., et al.	257	759	02/04/1994
	US-5,444,015	08/22/1995	Aitken, John M., et al.	437	182	04/11/1994
	US-5,447,887	09/05/1995	Filipiak, Stanley , et al.	437	200	04/01/1994
	US-5,457,344	10/10/1995	Bartelink, Dirk J.	257	737	03/25/1994
	US-5,470,789	11/28/1995	Misawa, N.	437	190	03/07/1995
	US-5,470,801	11/28/1995	Kapoor, , et al.	437	238	06/28/1993
	US-5,485,037	01/16/1996	Marrs, R. C.	257	712	03/27/1995
	US-5,495,667	03/05/1996	Farnworth, Warren M., et al.	29	843	11/07/1994
	US-5,506,449	04/09/1996	Nakano, , et al.	257	758	03/23/1994
	US-5,510,645	04/23/1996	Fitch, J. T., et al.	257	522	01/17/1995
	US-5,538,922	07/23/1996	Cooper, K J., et al.	437	195	01/25/1995
	US-5,539,060	07/23/1996	Tsunogae, Y. , et al.	525	338	10/13/1995
	US-5,578,146	11/26/1996	Grant, L. A., et al.	148	437	01/16/1996
	US-5,595,937	01/21/1997	Mikagi, K.	437	192	04/12/1996
	US-5,609,721	03/11/1997	Tsukune, A , et al.	156	646.1	01/03/1995
	US-5,635,253	06/03/1997	Canaperi, , et al.	427	437	06/07/1995
	US-5,654,245	08/05/1997	Allen, Gregory L.	438	629	03/23/1993
	US-5,667,600	09/16/1997	Grensing, Fritz C., et al.	148	437	03/31/1994
	US-5,670,420	09/23/1997	Choi, Kyeong K.	437	189	11/08/1995
	US-5,674,787	10/07/1997	Zhao, , et al.	437	230	01/16/1996
	US-5,679,608	10/21/1997	Cheung, , et al.	437	195	06/05/1995
	US-5,681,441	10/28/1997	Svendsen, , et al.	205	114	12/22/1992
	US-5,695,810	12/09/1997	Dubin, , et al.	427	96	11/20/1996
	US-5,719,089	02/17/1998	Cherng, Meng-Jaw , et al.	438	637	06/21/1996
	US-5,719,410	02/17/1998	Suehiro, S. , et al.	257	77	12/16/1996
	US-5,725,689	03/10/1998	Nishida, S. , et al.	148	320	10/05/1995
	US-5,739,579	04/14/1998	Chiang, Chien , et al.	257	635	09/10/1996
	US-5,763,953	06/09/1998	Iljima, T. , et al.	257	762	01/18/1996
	US-5,780,358	07/14/1998	Zhou, M. S.	438	645	04/08/1996
	US-5,785,570	07/28/1998	Bruni, M. D.	445	52	07/25/1995
	US-5,792,522	08/11/1998	Jin, S. , et al.	427	575	09/18/1996
	US-5,801,098	09/01/1998	Fiordalice, R. , et al.	438	653	09/03/1996
	US-5,814,557	09/29/1998	Venkatraman, Ramnath , et al.	438	622	05/20/1996
	US-5,821,168	10/13/1998	Jain, Ajay	438	692	07/16/1997
	US-5,824,599	10/20/1998	Schacham-Diamond, Yosef , et al.	438	678	01/16/1996
	US-5,852,871	12/29/1998	Khandros, I. Y.	29	843	12/11/1995

EXAMINER**DATE CONSIDERED**

INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		<i>Complete if Known</i>	
		Application Number	Unknown
		Filing Date	Even Date Herewith
		First Named Inventor	Ahn, Kie
		Group Art Unit	Unknown
Examiner Name		Unknown	
Sheet 4 of 9		Attorney Docket No: 303.685US2	

	US-5,858,877	01/12/1999	Dennison, C. H., et al.	438	700	01/21/1997
	US-5,891,797	04/06/1999	Farrar, P. A.	438	619	10/20/1997
	US-5,891,804	04/06/1999	Havemann, R. H., et al.	438	674	04/14/1997
	US-5,895,740	04/20/1999	Chien, Rong-Wu , et al.	430	313	11/13/1996
	US-5,897,370	04/27/1999	Joshi, R. V., et al.	438	632	10/28/1996
	US-5,907,772	05/25/1999	Iwasaki, Haruo	438	253	02/26/1997
	US-5,911,113	06/08/1999	Yao, G. , et al.	438	649	03/18/1997
	US-5,925,930	07/20/1999	Farnworth, Warren M., et al.	257	737	05/21/1996
	US-5,930,669	07/27/1999	Uzoh, Cyprian	438	627	04/03/1997
	US-5,932,928	08/03/1999	Clampitt, D. A.	257	758	07/03/1997
	US-5,940,733	08/17/1999	Beinglass, Israel , et al.	438	655	07/29/1997
	US-5,948,467	09/07/1999	Nguyen, T. , et al.	427	99	07/24/1998
	US-5,962,923	10/05/1999	Xu, Z. , et al.	257	774	08/07/1995
	US-5,972,179	10/26/1999	Chittipeddi, , et al.	204	192.17	09/30/1997
	US-5,972,804	10/26/1999	Tobin, , et al.	438	786	11/03/1997
	US-5,976,710	11/02/1999	Sachdev, K. G., et al.	428	620	04/10/1997
	US-5,981,350	11/09/1999	Geusic, J. E., et al.	438	386	05/29/1998
	US-5,985,759	11/16/1999	Kim, E. , et al.	438	653	02/24/1998
	US-5,989,623	11/23/1999	Chen, Liang-Yuh , et al.	427	97	08/19/1997
	US-5,994,777	11/30/1999	Farrar, P. A.	257	758	08/26/1998
	US-6,004,884	12/21/1999	Abraham, L. C.	438	714	02/15/1996
	US-6,008,117	12/28/1999	Hong, , et al.	438	629	03/19/1997
	US-6,015,465	01/18/2000	Kholodenko, A. , et al.	118	719	04/08/1998
	US-6,015,738	01/18/2000	Levy, H. J., et al.	438	275	11/17/1997
	US-6,017,820	01/25/2000	Ting, C. H., et al.	438	689	07/17/1998
	US-6,025,261	02/15/2000	Farrar, C. , et al.	438	619	04/29/1998
	US-6,030,877	02/29/2000	Lee, C , et al.	438	381	10/06/1997
	US-6,037,248	03/14/2000	Ahn, Kie	438	619	06/13/1997
	US-6,057,226	05/02/2000	Wong, L. D.	438	623	11/25/1997
	US-6,065,424	05/23/2000	Shacham-Diamond, Y. , et al.	118	696	12/18/1996
	US-6,069,068	05/30/2000	Rathore, H. S., et al.	438	628	10/08/1997
	US-6,071,810	06/06/2000	Wada, Junichi , et al.	438	635	12/23/1997
	US-6,075,278	06/13/2000	Farrar, P. A.	257	522	04/24/1997
	US-6,075,287	06/13/2000	Ingraham, A. P., et al.			
	US-6,091,136	07/18/2000	Jiang, T. , et al.	257	676	11/17/1998
	US-6,091,475	07/18/2000	Ogino, T. , et al.	349	149	12/09/1997

EXAMINER

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First Named Inventor	Ahn, Kie
Group Art Unit	Unknown
Examiner Name	Unknown

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US-6,100,193	08/08/2000	Suehiro, S. , et al.	438	685	09/24/1997
US-6,126,989	10/03/2000	Robinson, Karl , et al.	427	97	08/26/1998
US-6,136,095	10/24/2000	Xu, Z. , et al.	118	719	10/06/1997
US-6,139,699	10/31/2000	Chiang, T. , et al.	204	192.15	05/27/1997
US-6,140,228	10/31/2000	Shan, E. , et al.	438	653	11/13/1997
US-6,140,234	10/31/2000	Uzoh, Cyprian , et al.	438	678	01/20/1998
US-6,143,646	11/07/2000	Wetzel, J. T.	438	637	06/03/1997
US-6,150,261	11/21/2000	Hsu, C. , et al.	438	640	05/25/1999
US-6,153,507	11/28/2000	Mikagi, K.	438	618	01/13/1998
US-6,159,769	12/12/2000	Farnsworth, Warren M. , et al.	438	108	01/05/1999
US-6,171,661	01/09/2001	Zheng, B. , et al.	427	535	02/25/1998
US-6,177,350	01/23/2001	Sundarajan, A. , et al.	438	688	04/14/1998
US-6,183,564	02/06/2001	Reynolds, G. J., et al.	118	719	11/12/1998
US-6,187,656	02/01/2001	Lu, , et al.	438	592	
US-6,190,732	02/20/2001	Omstead, , et al.	118	729	
US-6,197,688	03/06/2001	Simpson, Cindy R.	438	678	02/12/1998
US-6,204,065	03/20/2001	Ochiai, T.	436	66	03/24/1998
US-6,207,222	03/27/2001	Chen, Liang-Yuh , et al.	427	97	08/24/1999
US-6,207,553	05/27/2001	Buynoski, M. , et al.	438	622	01/26/1999
US-6,207,558	03/27/2001	Singhvi, Shri , et al.	438	648	10/01/1999
US-6,208,016	03/27/2001	Farrar, Paul	257	643	02/24/1999
US-6,211,049	04/03/2001	Farrar, Paul A.	438	597	02/24/1999
US-6,211,073	04/03/2001	Ahn, K. Y.	438	653	02/27/1998
US-6,221,763	04/24/2001	Gilton, Terry L.	438	643	04/05/1999
US-6,232,219	05/15/2001	Blalock, , et al.	438	637	05/20/1998
US-6,249,056	06/19/2001	Kwon, Dong-chul , et al.	257	758	11/01/1999
US-6,265,311	07/24/2001	Hautala, J J., et al.	438	680	04/27/1999
US-6,265,811	07/24/2001	Takeuchi, Y. , et al.			
US-6,271,592	08/07/2001	Kim, E. , et al.	257	751	08/06/1999
US-6,284,656	09/04/2001	Farrar, Paul A.	438	687	08/04/1998
US-6,287,954	09/11/2001	Ashley, L , et al.	438	622	12/09/1999
US-6,288,442	09/11/2001	Farrar, Paul A.	257	678	09/10/1998
US-6,288,905	09/11/2001	Chung, K. K.	361	771	10/04/1999
US-6,323,543	11/27/2001	Jiang, T. , et al.	257	676	04/13/2000
US-6,323,553	11/01/2001	Hsu, , et al.	257	751	11/01/2001
US-6,326,303	12/04/2001	Robinson, Karl , et al.	438	678	02/11/2000
US-6,342,448	01/29/2002	Lin, J. , et al.	438	687	05/31/2000
US-6,358,842	03/19/2002	Zhou, Mei-Sheng , et al.	438	633	08/07/2000

EXAMINER

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Sheet 6 of 9		Attorney Docket No: 303.685US2																													

	US-6,359,328	03/01/2002	Dubin,	257	622	
	US-6,368,954	04/09/2002	Lopatin, S D., et al.	438	627	07/28/2000
	US-6,372,622	04/16/2002	Tan, , et al.	438	612	10/26/1999
	US-6,376,370	04/23/2002	Farrar, Paul A.	438	678	
	US-6,383,920	05/07/2002	Wang, P. , et al.	438	639	01/10/2001
	US-6,387,542	05/14/2002	Kozlov, Alexander , et al.	428	673	07/06/2000
	US-6,399,489	06/04/2002	M'Saad, H. , et al.	438	680	11/01/1999
	US-6,403,481	06/11/2002	Matsuda, T. , et al.	438	687	08/10/1999
	US-6,429,120	08/06/2002	Ahn, Kie Y. , et al.	438	635	01/18/2000
	US-6,518,198	02/11/2003	Klein, Rita J.	438	758	08/31/2000

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Foreign Document No	Publication Date	Name of Patentee or Applicant of cited Document	Class	Subclass	T ²
	JP-05267643	10/15/1993	Muraoka Toru,	029	46	
	JP-07-321111	08/12/1995	Tetsuo, K.	H01L	21/320 5	
	JP-07078815	03/20/1995	Miyamoto, I.	HO1 L	21/320 5	

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		In: <u>Metals Handbook, Ninth Edition, Vol. 2, Properties and Selection: Nonferrous Alloys and Pure Metals</u> , ASM Handbook Committee, (eds.), American Society for Metals, Metals Park, OH,(1989),157, 395	
		In: <u>Kirk-Othmer Concise Encyclopedia of Chemical Technology</u> , Grayson, M., (ed.), John Wiley & Sons, Inc., New York, NY,(1985),p. 433-435, 926-938	
		"Brooks Model 5964 High Performance Metal Seal Mass Flow Controller (Introduced in 1991)", <u>Brooks Instrument</u> , http://www.frco.com/brooks/semiconductor/products1i.html ,(1991),1 page	
		ABE, K. , et al., "Sub-half Micron Copper Interconnects Using Reflow of Sputtered Copper Films", <u>VLSI Multilevel Interconnection Conference</u> , (June 25-27, 1995),308-311	
		ANDRICACOS, P. C., "Copper On-Chip Interconnections", <u>The Electrochemical Society Interface</u> , (1999),pp. 32-37	
		ANONYMOUS, "Formation of Conductors at Variable Depths -- Using Differential Photomask, Projecting Images into Insulator by Reactive Ion Etching, Selectively Filling Images with Conductor", <u>Research Disclosure</u> , Disclosure No. RD 291015, Abstract,(July 10, 1988),1 p.	
		BAE, S. , et al., "Low-Temperature Deposition Pathways to Silicon Nitride, Amorphous Silicon, Polycrystalline Silicon, and n type Amorphous Silicon Films Using a High Density Plasma System", <u>IEEE Conference Records--Abstracts</u> ,	

EXAMINER

DATE CONSIDERED

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Use as many sheets as necessary)

Complete if Known

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Attorney Docket No: 303.685US2

OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		International Conference on Plasma Science, (1997), pg. 315	
		BAI, G. , "Copper Interconnection Deposition Techniques and Integration", <u>1996 Symposium on VLSI Technology, Digest of Technical Papers</u> , (1996), 48-49	
		BERNIER, M. , et al., "Laser processing of palladium for selective electroless copper plating", <u>SPIE, 2045</u> , (1994), pp. 330-337	
		CABRERA, A. L., et al., "Oxidation protection for a variety of transition metals and copper via surface silicides formed with silane containing atmospheres", <u>J. Mater. Res.</u> , 6(1), (1991), pp. 71-79	
		DUDZINSKI, N. , et al., "The Youngs Modulus of Some Aluminum Alloys", <u>J. Institute of Metals, Vol. LXXIV</u> , (1947-48), pgs. 291-314	
		DUSHMAN, S. , et al., <u>Scientific Foundations of Vacuum Technique</u> , 2nd Edition, John Wiley and Sons, (1962), 1-806	
		EISENBRUN, E. T., et al., "Selective and Blanket Low-Temperature Copper CVD for Multilevel Metallization in ULSI", <u>Conference Proceedings ULSI-VII</u> , (1992), 5 pages	
		ELDRIDGE, J. M., "New Approaches for Investigating Corrosion in Thin Film Devices", <u>Electronic Packaging and Corrosion in Microelectronics, PRoceedings of ASM's Third Conference on Electric Packaging: Materials and Processes & Corrosion in Microelectronics</u> , Mpls, MN, (1987), pp. 283-285	
		FUKUDA, T. , et al., "0.5 -micrometer-Pitch Copper-Dual-Damascene Metallization Using Organic SOG (k=2.9) for 0.18-micrometer CMOS Applications", <u>IEEE</u> , (1999), pp. 619-622	
		GLADLFELTER, W. L., et al., "Trimethylamine Complexes of Alane as Precursors for the Low-Pressure Chemical Vapor Deposition of Aluminum", <u>Chemistry of Materials</u> , 1, (1989), pp. 339-343	
		GODEY, D. J., et al., "Copper Diffusion in Organic Polymer Resists and Inter-level Dielectrics", <u>Thin Solid Films</u> , 308-309, (1997), pp. 470-474	
		GRIMBLOT, J. , et al., "II. Oxidation of Aluminum Films", <u>J. Electrochem.</u> , 129, (1982), pp. 2369-2372	
		HATTANGADY, S. V. , et al., "Integrated processing of silicon oxynitride films by combined plasma and rapid-thermal processing", <u>J. Vac. Sci. Technol. A</u> , 14(6), (1996), pp. 3017-3023	
		HYMES, S. , et al., "Passivation of Copper by Silicide Formation in Dilute Silane", <u>Conference Proceedings ULSI-VII</u> , (1992), pp. 425-431	
		JEON, Y. , et al., "Low-Temperature Fabrication of Polycrystalline Silicon Thin Films by ECR Pecvd", <u>The Electrochemical Society Proceedings</u> , 94(35), (1995), pp. 103-114	
		KALOYEROS, A. E., et al., "Blanket and Selective Copper CVD from Cu(FOD)2 for Multilivel Metallization", <u>Mat. Res. Soc. Symp. Proc.</u> , Vol. 181, (1990), 6 pages	
		KAMINS, T. I., "Structure and Properties of LPCVD Silicon Films", <u>J. Electrochem. Soc.: Solid-State Science and Technology</u> , 127, (March 1980), pp.	

EXAMINER

DATE CONSIDERED

Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		Application Number	Unknown
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OTHER DOCUMENTS -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	686-690		
		KEPPNER, H. , et al., "The "Micromorph" Cell: A New Way to High-Efficiency-Low-Temperature Crystalline Silicon Thin-Film Cell Manufacturing", <u>Mat. Res. Soc. Symp. Proc.</u> , 452, (1997),pp. 865-876	
		KIANG, M. , et al., "Pd/Si plasma immersion ion implantation for selective electroless copper plating on SiO ₂ ", <u>Appl. Phys. Lett.</u> , 60, (1992),pp. 2767-2769	
		KISTIAKOWSKY, G. B., et al., "Reactions of Nitrogen Atoms. I. Oxygen and Oxides of Nitrogen", <u>The Journal of Chemical Physics</u> , 27(5), (1957),pp. 1141-1149	
		KLAUS, J W., et al., "Atomic Layer Deposition of Tungsten Nitride Films Using Sequential Surface Reactions", <u>Journal of the Electrochemical Society</u> , vol.147, no.3, (March 2000),1175-1181	
		MILLER, R. D., et al., "Low Dielectric Constant Polyimides and Polyimide Nanofoams", <u>Seventh Meeting of the DuPont Symposium on Polyimides in Microelectronics</u> , (September 1996),pp. 443-473	
		MIN, J. , "Metal-organic atomic-layer deposition of titanium-silicon-nitride films", <u>Applied Physics Letters</u> , 75(11), (1999),1521-1523	
		OKAMOTO, Y. , et al., "Magnetically Excited Plasma Oxynitridation of Si at Room Temperature", <u>Jpn. J. Appl. Phys.</u> , 34, (1995),pp. L955-957	
		RATH, J. K., et al., "Low-Temperature deposition of polycrystalline silicon thin films by hot-wire CVD", <u>Solar Energy Materials and Solar Cells</u> , 48, (1997),pp. 269-277	
		RAY, S. K., et al., "Flourine-enhanced nitridation of silicon at low temperatures in a microwave plasma", <u>J. Appl. Phys.</u> , 70(3), (1991),pp. 1874-1876	
		SHACHAM-DIAMOND, Y. , et al., "Copper electroless deposition technology for ultra-large-scale-integration (ULSI) metallization", <u>Microelectronic Engineering</u> , 33, (1997),pp. 47-58	
		STROUD, P. T., et al., "Preferential deposition of silver induced by low energy gold ion implantation", <u>Thin Solid Films</u> , Switzerland, Vol. 9, No. 2, XP000993098, (Feb. 1972),273-281	
		TSUKADA, T. , et al., "Adhesion of copper films on ABS polymers deposited in an internal magnet magnetron sputtering system", <u>J. Vac. Sci. Technol.</u> , 16(2), (1979),348-351	
		VOSSEN, J. L., et al., <u>Thin Film Processes II</u> , Academic Press, Inc.,(1991),1-866	
		WANG, K. , et al., "Very Low Temperature Deposition of Polycrystalline Silicon Films with Micro-Meter-Order Grains on SiO ₂ ", <u>Mat. Res. Soc. Symp. Proc.</u> , 355, (1995),pp. 581-586	
		WINTERS, H. F., et al., "Influence of Surface Absorption Characteristics on Reactivity Sputtered Films Grown in the Biased and Unbiased Modes", <u>J. Appl. Phys.</u> , 43(3), (1972),pp. 794-799	

EXAMINER

DATE CONSIDERED

Substitute for form 1449A/PTO		Complete if Known	
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		WOLF, S., "Chapter 4: Multilevel-Interconnect Technology for VLSI and ULSI", In: Silicon Processing for the VLSI Era, Vol. 2 Process Integration, Lattice Press, Sunset Beach, CA,(1990),176-297	

EXAMINER

DATE CONSIDERED